CMOR
Professional Dome
User Manual

Product ranges covered by this manual

CMOR *Classic*: Vi-D118, Vi-D126 and CMOR *Evolution*: Vi-D218, Vi-D228, Vi-D236		
Vi-PSU-1	Vi-ALM1	Options

Document Reference	Date	Firmware
Vc601i.doc	14/02/2010	From Vc001A92/Vc005b01

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1 Configuring the Dome

1.1 CMOR *Evolution* Configuration

1.1.1 Auto-Protocol and Auto-Baud

No DIP switch configuration is necessary if the DIP switches are left in their default configuration (all switches OFF except for 6-way DIP switches section 6 ON). Some Evolution domes do not have switches fitted.

The CMOR Evolution will automatically detect the protocol and the baud rate. Currently supported protocols are:

- Videoswitch VXP-4 (RS485)
- Pelco-D (RS485)
- Pelco-P (RS485)
- Vista (RS485)
- BBV up-the-coax

Supported baud rates are:

- 2400
- 4800
- 9600

1.1.2 Address

The CMOR Evolution will initially respond to all addresses. If there is more than one dome on the same controller an address for each one must be programmed via its menu. Note that if several domes are connected they will all respond to commands until their individual addresses are set.

To set an address via the menu:

1. Select the camera (dome) you wish to configure on the DVR or other controller
2. Enter the dome menu (SET Preset 95 for Pelco)
3. Move joystick **Right** to log-in menu
4. Enter displayed serial number as password using **Up/Down/Left/Right**
5. **Left** to exit menu
6. **Down**, then **Right** to enter the **Address** menu
7. **Up/Down** to set the address to the displayed address of the controller
8. **Left** to exit

If the address of a dome has been set and needs changing, you either need to talk to it using the correct camera address so you can enter the menu and change it as describe above, or you need to reset the dome address as describe in the next section.

1.1.3 Reset Address

Issue five **SET Preset 90** commands in succession, not more than 5 seconds apart. This will reset the dome address of *all connected domes.*

1.1.4 Termination

- If you are using a star expander (eg. Videoswitch Vi-E2) to drive multiple domes (which is the recommended method) all domes should be have termination ON.
- If you are using an alarm module, termination in the dome should also always be ON.
- If you are daisy-chaining domes, for all except the last in the daisy chain, you will need to turn the termination of the alarm module OFF (if fitted) or else turn the termination of the dome OFF. The dome at the end of the daisy chain must have its termination ON and likewise the termination of the alarm module (if fitted) must be ON.

If you do need to turn the termination of a dome OFF, you will have to either:

- If your CMOR Evolution dome has no DIP switches, the termination is set via its menu.
- If your CMOR Evolution domes does have DIP switches, set the termination switch as described in section 1.2.5.

1.2 CMOR *Classic* Configuration

The CMOR dome is supplied with DIP switches set for the following configuration:

Twisted pair: Address: 1

Protocol: Videoswitch VXP4

Baud rate: 9600 baud,

Termination: ON

Up-the-coax: BBV compatible

Dome Address	**8-way DIP switch**							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	1	0	0	0	0	0	0	0

Protocol, baud, termination	**6-way DIP switch**					
	1	**2**	**3**	**4**	**5**	**6**
VXP4&Coax/9600 baud/On	0	0	0	0	0	1

1.2.1 Removing the DIP switch cover

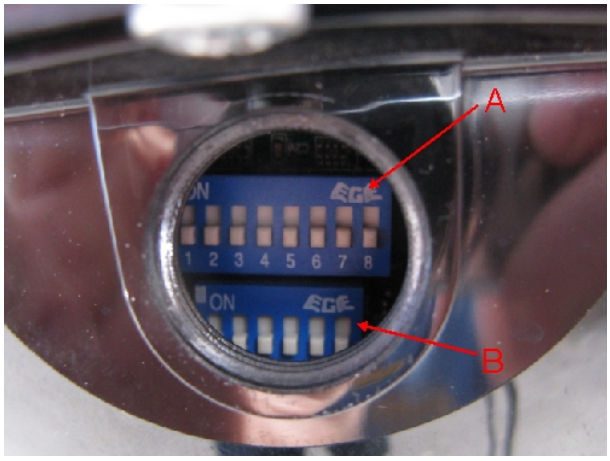
If you need to change DIP switch settings, you may do so either before or after the dome is mounted on its bracket, whichever is more convenient.

- Using a large flat bladed screwdriver, unscrew the DIP switch access screw (A) on the rear of the dome by turning counter-clockwise

A

1.2.2 Setting the dome address

- Set the 8-way switch (A) to the required address (camera number) of the dome as per the table below. “0” represents OFF (down) and “1” represents ON (up).



Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
not used	0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0	0
2	0	1	0	0	0	0	0	0
3	1	1	0	0	0	0	0	0
4	0	0	1	0	0	0	0	0
5	1	0	1	0	0	0	0	0
6	0	1	1	0	0	0	0	0
7	1	1	1	0	0	0	0	0
8	0	0	0	1	0	0	0	0
9	1	0	0	1	0	0	0	0
10	0	1	0	1	0	0	0	0
11	1	1	0	1	0	0	0	0
12	0	0	1	1	0	0	0	0
13	1	0	1	1	0	0	0	0
14	0	1	1	1	0	0	0	0
15	1	1	1	1	0	0	0	0

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
16	0	0	0	0	1	0	0	0
17	1	0	0	0	1	0	0	0
18	0	1	0	0	1	0	0	0
19	1	1	0	0	1	0	0	0
20	0	0	1	0	1	0	0	0
21	1	0	1	0	1	0	0	0
22	0	1	1	0	1	0	0	0
23	1	1	1	0	1	0	0	0
24	0	0	0	1	1	0	0	0
25	1	0	0	1	1	0	0	0
26	0	1	0	1	1	0	0	0
27	1	1	0	1	1	0	0	0
28	0	0	1	1	1	0	0	0
29	1	0	1	1	1	0	0	0
30	0	1	1	1	1	0	0	0
31	1	1	1	1	1	0	0	0

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
32	0	0	0	0	0	1	0	0
33	1	0	0	0	0	1	0	0
34	0	1	0	0	0	1	0	0
35	1	1	0	0	0	1	0	0
36	0	0	1	0	0	1	0	0
37	1	0	1	0	0	1	0	0
38	0	1	1	0	0	1	0	0
39	1	1	1	0	0	1	0	0
40	0	0	0	1	0	1	0	0
41	1	0	0	1	0	1	0	0
42	0	1	0	1	0	1	0	0
43	1	1	0	1	0	1	0	0
44	0	0	1	1	0	1	0	0
45	1	0	1	1	0	1	0	0
46	0	1	1	1	0	1	0	0
47	1	1	1	1	0	1	0	0

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
48	0	0	0	0	1	1	0	0
49	1	0	0	0	1	1	0	0
50	0	1	0	0	1	1	0	0
51	1	1	0	0	1	1	0	0
52	0	0	1	0	1	1	0	0
53	1	0	1	0	1	1	0	0
54	0	1	1	0	1	1	0	0
55	1	1	1	0	1	1	0	0
56	0	0	0	1	1	1	0	0
57	1	0	0	1	1	1	0	0
58	0	1	0	1	1	1	0	0
59	1	1	0	1	1	1	0	0
60	0	0	1	1	1	1	0	0
61	1	0	1	1	1	1	0	0
62	0	1	1	1	1	1	0	0
63	1	1	1	1	1	1	0	0

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
64	0	0	0	0	0	0	1	0
65	1	0	0	0	0	0	1	0
66	0	1	0	0	0	0	1	0
67	1	1	0	0	0	0	1	0
68	0	0	1	0	0	0	1	0
69	1	0	1	0	0	0	1	0
70	0	1	1	0	0	0	1	0
71	1	1	1	0	0	0	1	0
72	0	0	0	1	0	0	1	0
73	1	0	0	1	0	0	1	0
74	0	1	0	1	0	0	1	0
75	1	1	0	1	0	0	1	0
76	0	0	1	1	0	0	1	0
77	1	0	1	1	0	0	1	0
78	0	1	1	1	0	0	1	0
79	1	1	1	1	0	0	1	0

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
80	0	0	0	0	1	0	1	0
81	1	0	0	0	1	0	1	0
82	0	1	0	0	1	0	1	0
83	1	1	0	0	1	0	1	0
84	0	0	1	0	1	0	1	0
85	1	0	1	0	1	0	1	0
86	0	1	1	0	1	0	1	0
87	1	1	1	0	1	0	1	0
88	0	0	0	1	1	0	1	0
89	1	0	0	1	1	0	1	0
90	0	1	0	1	1	0	1	0
91	1	1	0	1	1	0	1	0
92	0	0	1	1	1	0	1	0
93	1	0	1	1	1	0	1	0
94	0	1	1	1	1	0	1	0
95	1	1	1	1	1	0	1	0

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
96	0	0	0	0	0	1	1	0
97	1	0	0	0	0	1	1	0
98	0	1	0	0	0	1	1	0
99	1	1	0	0	0	1	1	0
100	0	0	1	0	0	1	1	0
101	1	0	1	0	0	1	1	0
102	0	1	1	0	0	1	1	0
103	1	1	1	0	0	1	1	0
104	0	0	0	1	0	1	1	0
105	1	0	0	1	0	1	1	0
106	0	1	0	1	0	1	1	0
107	1	1	0	1	0	1	1	0
108	0	0	1	1	0	1	1	0
109	1	0	1	1	0	1	1	0
110	0	1	1	1	0	1	1	0
111	1	1	1	1	0	1	1	0

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
112	0	0	0	0	1	1	1	0
113	1	0	0	0	1	1	1	0
114	0	1	0	0	1	1	1	0
115	1	1	0	0	1	1	1	0
116	0	0	1	0	1	1	1	0
117	1	0	1	0	1	1	1	0
118	0	1	1	0	1	1	1	0
119	1	1	1	0	1	1	1	0
120	0	0	0	1	1	1	1	0
121	1	0	0	1	1	1	1	0
122	0	1	0	1	1	1	1	0
123	1	1	0	1	1	1	1	0
124	0	0	1	1	1	1	1	0
125	1	0	1	1	1	1	1	0
126	0	1	1	1	1	1	1	0
127	1	1	1	1	1	1	1	0

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
128	0	0	0	0	0	0	0	1
129	1	0	0	0	0	0	0	1
130	0	1	0	0	0	0	0	1
131	1	1	0	0	0	0	0	1
132	0	0	1	0	0	0	0	1
133	1	0	1	0	0	0	0	1
134	0	1	1	0	0	0	0	1
135	1	1	1	0	0	0	0	1
136	0	0	0	1	0	0	0	1
137	1	0	0	1	0	0	0	1
138	0	1	0	1	0	0	0	1
139	1	1	0	1	0	0	0	1
140	0	0	1	1	0	0	0	1
141	1	0	1	1	0	0	0	1
142	0	1	1	1	0	0	0	1
143	1	1	1	1	0	0	0	1

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
144	0	0	0	0	1	0	0	1
145	1	0	0	0	1	0	0	1
146	0	1	0	0	1	0	0	1
147	1	1	0	0	1	0	0	1
148	0	0	1	0	1	0	0	1
149	1	0	1	0	1	0	0	1
150	0	1	1	0	1	0	0	1
151	1	1	1	0	1	0	0	1
152	0	0	0	1	1	0	0	1
153	1	0	0	1	1	0	0	1
154	0	1	0	1	1	0	0	1
155	1	1	0	1	1	0	0	1
156	0	0	1	1	1	0	0	1
157	1	0	1	1	1	0	0	1
158	0	1	1	1	1	0	0	1
159	1	1	1	1	1	0	0	1

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
160	0	0	0	0	0	1	0	1
161	1	0	0	0	0	1	0	1
162	0	1	0	0	0	1	0	1
163	1	1	0	0	0	1	0	1
164	0	0	1	0	0	1	0	1
165	1	0	1	0	0	1	0	1
166	0	1	1	0	0	1	0	1
167	1	1	1	0	0	1	0	1
168	0	0	0	1	0	1	0	1
169	1	0	0	1	0	1	0	1
170	0	1	0	1	0	1	0	1
171	1	1	0	1	0	1	0	1
172	0	0	1	1	0	1	0	1
173	1	0	1	1	0	1	0	1
174	0	1	1	1	0	1	0	1
175	1	1	1	1	0	1	0	1

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
176	0	0	0	0	1	1	0	1
177	1	0	0	0	1	1	0	1
178	0	1	0	0	1	1	0	1
179	1	1	0	0	1	1	0	1
180	0	0	1	0	1	1	0	1
181	1	0	1	0	1	1	0	1
182	0	1	1	0	1	1	0	1
183	1	1	1	0	1	1	0	1
184	0	0	0	1	1	1	0	1
185	1	0	0	1	1	1	0	1
186	0	1	0	1	1	1	0	1
187	1	1	0	1	1	1	0	1
188	0	0	1	1	1	1	0	1
189	1	0	1	1	1	1	0	1
190	0	1	1	1	1	1	0	1
191	1	1	1	1	1	1	0	1

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
192	0	0	0	0	0	0	1	1
193	1	0	0	0	0	0	1	1
194	0	1	0	0	0	0	1	1
195	1	1	0	0	0	0	1	1
196	0	0	1	0	0	0	1	1
197	1	0	1	0	0	0	1	1
198	0	1	1	0	0	0	1	1
199	1	1	1	0	0	0	1	1
200	0	0	0	1	0	0	1	1
201	1	0	0	1	0	0	1	1
202	0	1	0	1	0	0	1	1
203	1	1	0	1	0	0	1	1
204	0	0	1	1	0	0	1	1
205	1	0	1	1	0	0	1	1
206	0	1	1	1	0	0	1	1
207	1	1	1	1	0	0	1	1

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
208	0	0	0	0	1	0	1	1
209	1	0	0	0	1	0	1	1
210	0	1	0	0	1	0	1	1
211	1	1	0	0	1	0	1	1
212	0	0	1	0	1	0	1	1
213	1	0	1	0	1	0	1	1
214	0	1	1	0	1	0	1	1
215	1	1	1	0	1	0	1	1
216	0	0	0	1	1	0	1	1
217	1	0	0	1	1	0	1	1
218	0	1	0	1	1	0	1	1
219	1	1	0	1	1	0	1	1
220	0	0	1	1	1	0	1	1
221	1	0	1	1	1	0	1	1
222	0	1	1	1	1	0	1	1
223	1	1	1	1	1	0	1	1

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
224	0	0	0	0	0	1	1	1
225	1	0	0	0	0	1	1	1
226	0	1	0	0	0	1	1	1
227	1	1	0	0	0	1	1	1
228	0	0	1	0	0	1	1	1
229	1	0	1	0	0	1	1	1
230	0	1	1	0	0	1	1	1
231	1	1	1	0	0	1	1	1
232	0	0	0	1	0	1	1	1
233	1	0	0	1	0	1	1	1
234	0	1	0	1	0	1	1	1
235	1	1	0	1	0	1	1	1
236	0	0	1	1	0	1	1	1
237	1	0	1	1	0	1	1	1
238	0	1	1	1	0	1	1	1
239	1	1	1	1	0	1	1	1

Dome Address	8-way DIP switch							
	1	2	3	4	5	6	7	8
240	0	0	0	0	1	1	1	1
241	1	0	0	0	1	1	1	1
242	0	1	0	0	1	1	1	1
243	1	1	0	0	1	1	1	1
244	0	0	1	0	1	1	1	1
245	1	0	1	0	1	1	1	1
246	0	1	1	0	1	1	1	1
247	1	1	1	0	1	1	1	1
248	0	0	0	1	1	1	1	1
249	1	0	0	1	1	1	1	1
250	0	1	0	1	1	1	1	1
251	1	1	0	1	1	1	1	1
252	0	0	1	1	1	1	1	1
253	1	0	1	1	1	1	1	1
254	0	1	1	1	1	1	1	1
255	1	1	1	1	1	1	1	1

1.2.3 Setting the dome protocol

- Set sections 1,2 and 3 of the 6-way switch (B) as per the table below to select the required protocol. “0” represents OFF (down) and “1” represents ON (up).

Protocol	1	2	3
Videoswitch VXP4 and BBV up-the-coax	0	0	0
Videoswitch VXP4 only	1	0	0
PelcoP	0	1	0
PelcoD	1	1	0
Vista	0	0	1
spare	1	0	1
spare	0	1	1
spare	1	1	1

If coax telemetry is not being used, a protocol other than the first one should be selected to minimise the possibility of spurious commands being received.

1.2.4 Setting the baud rate

- Set sections 4 and 5 of the 6-way switch (B) as per the table below to select the required baud rate. “0” represents OFF (down) and “1” represents ON (up).
- The default setting is 9600 baud (both switches OFF)
- PelcoD normally uses 2400 baud
- PelcoP normally uses 4800 baud

Baud rate	4	5
9600	0	0
2400	1	0
4800	0	1
19200	1	1

1.2.5 Setting the RS485 termination

Set section 6 of the 6-way switch (B) as per the table below to select the termination of the RS485 twisted pair input. “0” represents OFF (down) and“1” represents ON (up). The default position in ON (up).

Termination	6
OFF	0
ON	1

The termination switch should be ON if:

- The dome is the only one connected to the twisted pair
- The dome is the last one of several domes connected to the twisted pair
- An alarm module is fitted into the dome power supply

The termination switch should be OFF if:

- More than one dome is connected to the twisted pair and the dome is *not* the last in the line.

1.2.6 Replacing the DIP switch cover

- Replace the DIP switch access screw (A) on the rear of the dome
- Take care that the thread is correctly aligned, that there is no dirt or grit that could affect the waterproof seal.
- Using a large flat bladed screwdriver turn clockwise to secure the screw.
- **Do not over-tighten.**

A

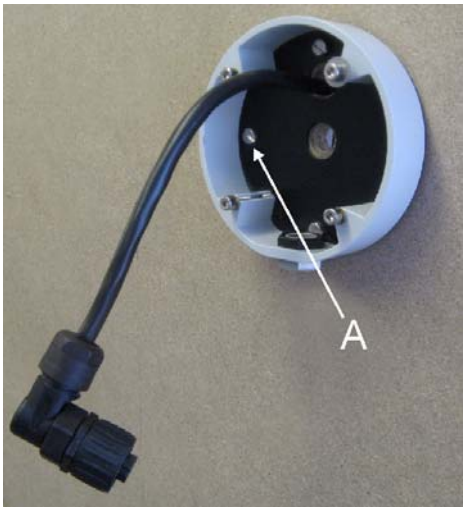
2 Installing the Dome

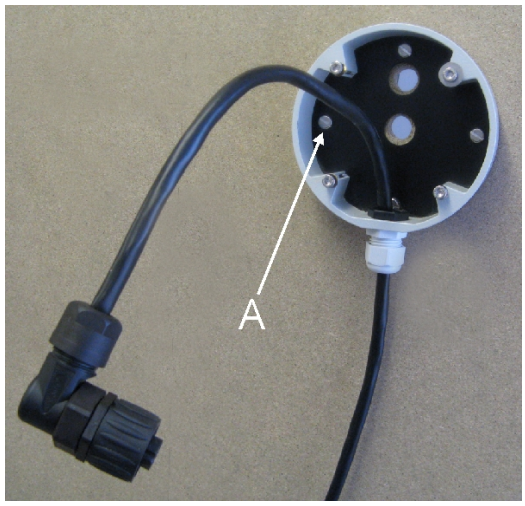
These installation instructions assume that a standard wall-mount bracket is being used. For swan-neck, pendant and corner options, refer to their specific instruction sheet.

2.1 Fixing the mounting ring or plate

- Fix the mounting ring to the wall using four screws (A) of adequate size and strength to support the weight of the dome and bracket.
- Fit the umbilical cable, entering either through the wall or via a cable gland as illustrated below.

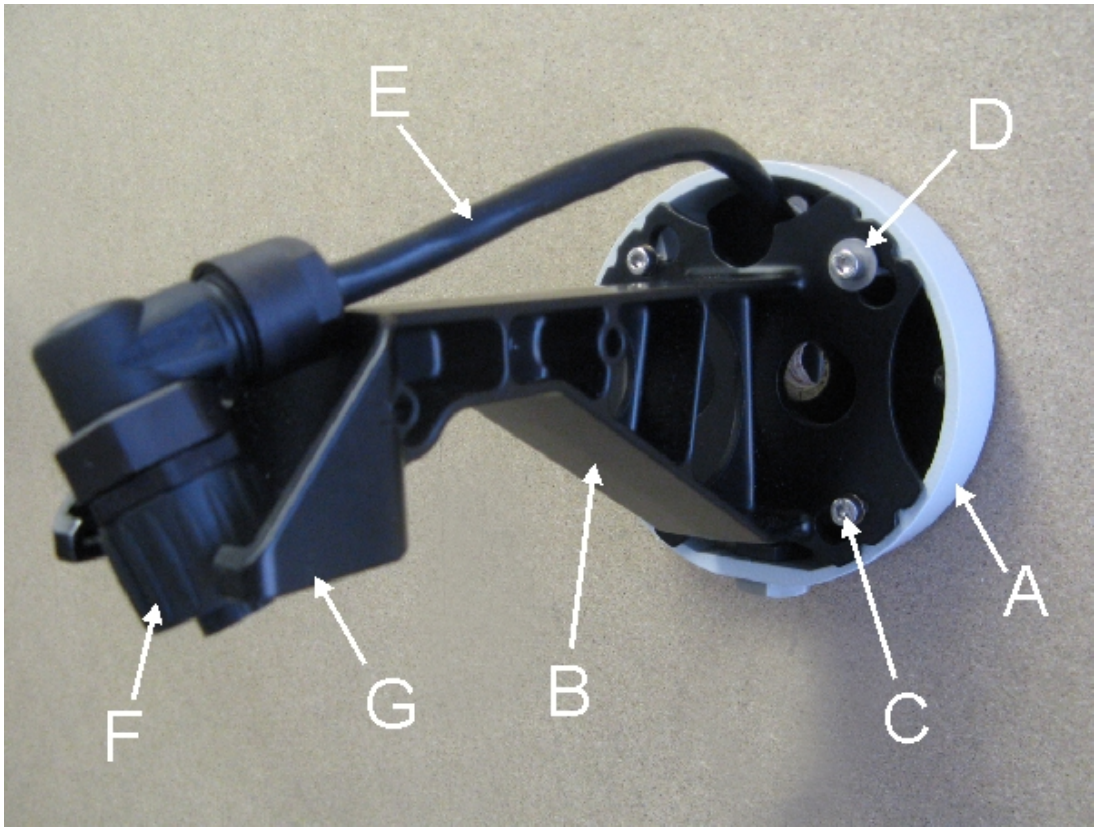
Note that a mounting plate is now being supplied in place of this ring. In this case for bottom entry, the knockout in the bottom of the plastic bracket covers must be removed.





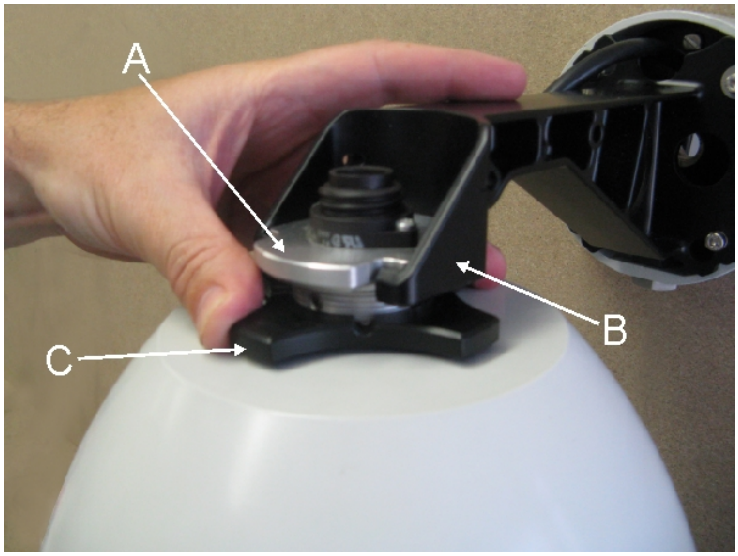
2.2 Securing the bracket

- Secure the bracket (B) to the mounting plate (A) using the 4 screws supplied (C)
- For safety reasons, one of the fixing screws **must have washer (D)** fitted as shown below.
- Position the umbilical cable (E) such that the connector (F) is above the dome support cradle (G)



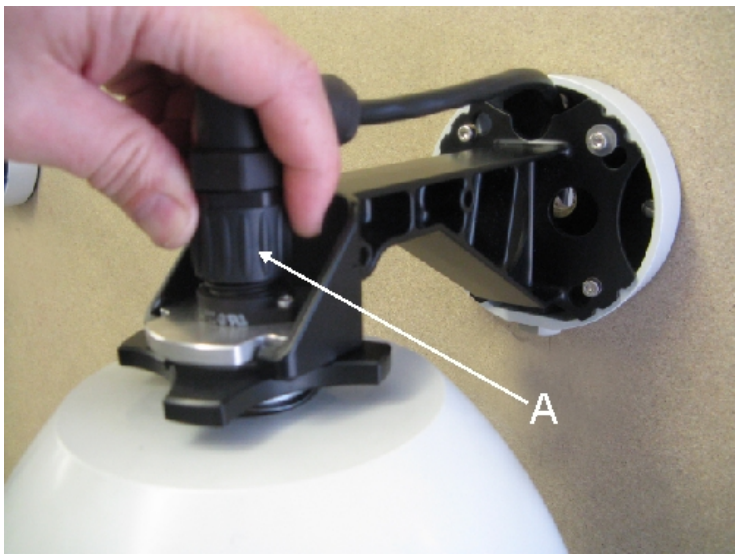
2.3 Attaching the CMOR Dome

- Fully loosen the locking ring (C) by rotating clockwise until it nearly touches the top of the dome
- Lift the dome (taking care not to lift it using lamps) and place the dome support plate (A) onto the dome support cradle (B). Note that the curved side of the support plate goes to the back.
- Rotate the locking ring (C) counter-clockwise to lock the dome firmly in position.



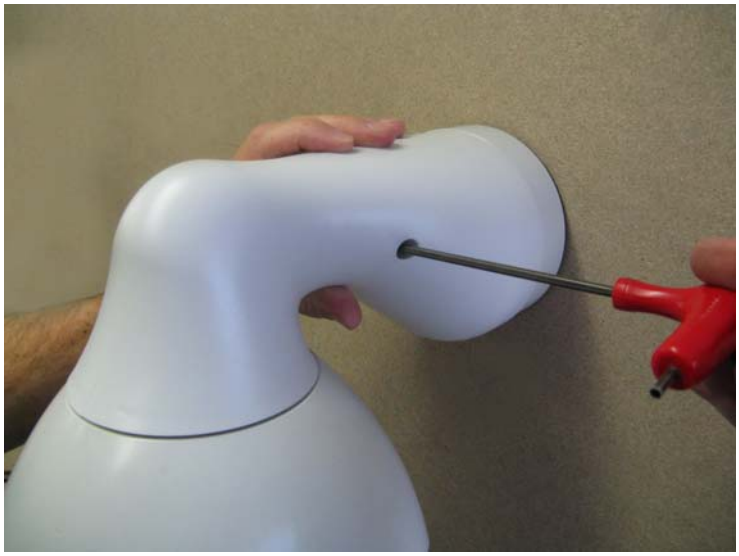
2.4 Attaching the umbilical cable

- Plug the waterproof connector on the umbilical cable into the top of the dome
- Turn the locking ring (A) clockwise to secure the connector



2.5 Fitting the bracket cover

- Locate the two plastic sides of the cover on the metal support bracket
- Fix together with the supplied screw using the supplied Allen key

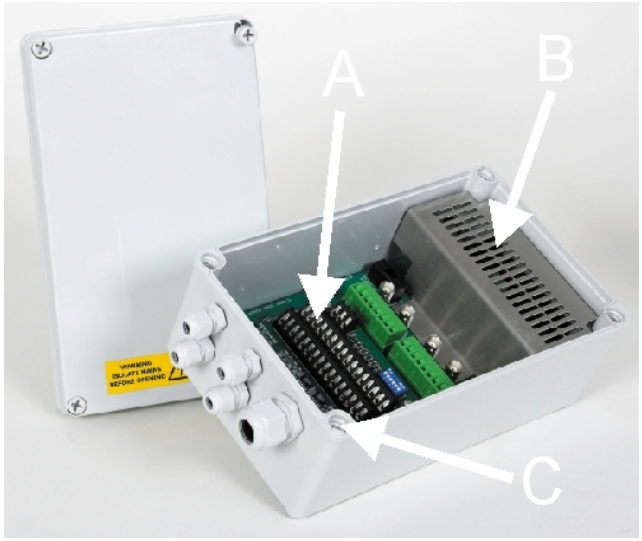


3 Installing Power Supply

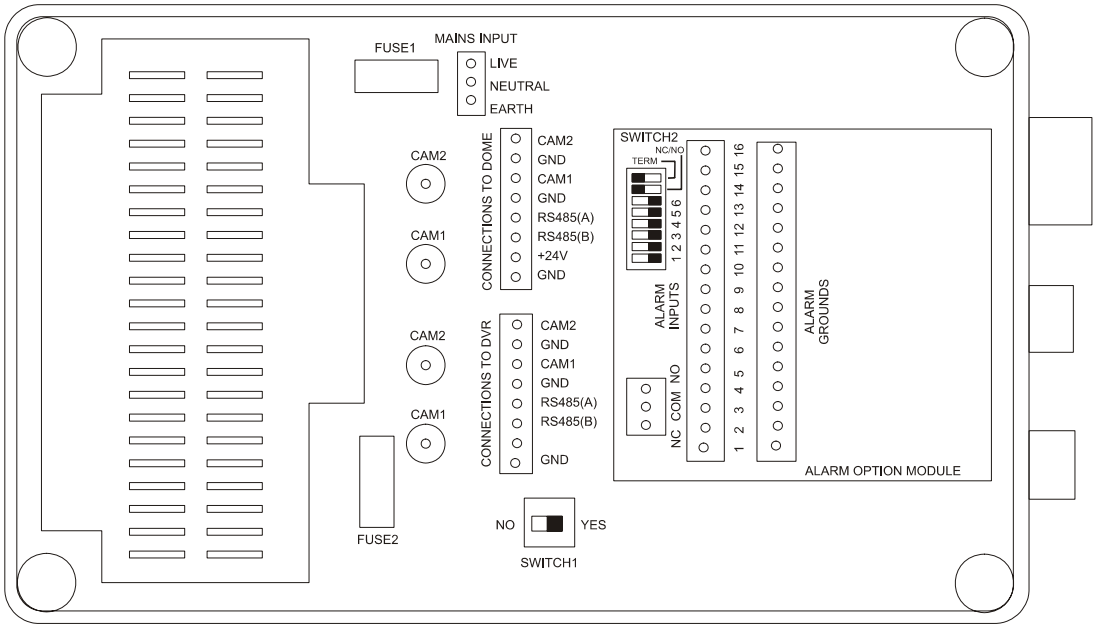
The CMOR-PSU-1 power is supplied in a weatherproof box that may be mounted externally or internally.

3.1 Fixing power supply to wall

- Fit the optional alarm module (A) into the power supply using the 4 screws provided.
- For safety reasons **never remove the slotted metal cover** (B).
- Fix the power supply to a wall using a screw in each of the four corner holes (C).



3.2 Power Supply Connections



3.2.1 Mains Input

Identification	Mains Power
Live	Live (brown) 240Vac 50Hz
Neutral	Neutral (blue) 240Vac 50Hz
Earth	Earth (Yellow/Green)

3.2.2 Connections to dome

Identification	Umbilical lead to dome
CAM2	White Coax signal (dual camera version only)
GND	White Coax screen (dual camera version only)
CAM1	Black Coax signal
GND	Black Coax screen
RS485 (A)	WHITE
RS485 (B)	ORANGE
+24V	RED
0V	BLACK and Cable screen

3.2.3 Connections to DVR

Identification	DVR
CAM2*	Camera input (dual camera version only)

GND	
CAM1*	Camera input
GND	
RS485 (A)	RS485 (A) or (+) dome output
RS485 (B)	RS485 (B) or (-) dome output
Spare	Not connection
GND	RS485 ground

Identification	DVR
CAM2 (BNC)*	DVR camera input (dual camera version only)
CAM1 (BNC)*	DVR camera input
CAM2 (BNC)	Loop-through provided for test monitor (dual camera version only)
CAM1 (BNC)	Loop-through provided for test monitor

*Note that the video connection(s) made be made either using the BNC or the screw terminals, whichever is more convenient.

3.3 Alarm Module Connections

3.3.1 Alarm Inputs

Identification	Alarm Inputs
1	Connect to NO or NC relay contact of PIRs or other alarm sources.
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

3.3.2 Alarm Grounds

All alarms grounds are connected together and any may be used for the relay common outputs of the PIRs or other alarm sources.

3.3.3 Relay Connections

Identification	Alarm Inputs
NO	Connect to DVR alarm input if normally open signal is required
COM	Connect to DVR alarm input ground
NC	Connect to DVR alarm input if normally closed signal is required

4 Configuring the Alarm Module

4.1 Normally Open or Closed Alarm Inputs

Set section the switch identified “NO/NC” as per the table below to select whether all the alarm inputs are connected to sensors with normally open or normally closed outputs. “0” represents OFF (down) and“1” represents ON (up). The default position in ON (up).

Termination	TERM
Normally Open	0
Normally Closed	1

Note that if Normally Closed is selected, all unused alarm inputs must be linked to ground to prevent alarms being continuously generated.

4.2 RS485 Termination

Set section the switch identified “TERM” as per the table below to select the termination of the RS485 twisted pair input. “0” represents OFF (down) and“1” represents ON (up). The default position in ON (up).

Termination	TERM
OFF	0
ON	1

The termination switch should be ON if:

- The dome is the only one connected to the twisted pair
- The dome is the last one of several domes connected to the twisted pair

The termination switch should be OFF if:

- More than one dome is connected to the twisted pair and the dome is *not* the last in the line.

4.3 Setting the alarm module protocol

- Set sections 1,2 and 3 switch as per the table below to select the required protocol. “0” represents OFF (down) and “1” represents ON (up).

Protocol	1	2	3	4
Videoswitch VXP4 and BBV up-the-coax	0	0	0	0
Videoswitch VXP4 only	1	0	0	0
PelcoP	0	1	0	0
PelcoD	1	1	0	0

The alarm module protocol should be set to be the same as the dome protocol.

4.4 Setting the alarm module baud rate

- Set sections 5 and 6 of the DIP switch as per the table below to select the required baud rate. “0” represents OFF (down) and “1” represents ON (up).
- The default setting is 9600 baud (both switches OFF)
- PelcoD normally uses 2400 baud
- PelcoP normally uses 4800 baud

Baud rate	5	6
9600	0	0
2400	1	0
4800	0	1
19200	1	1

The alarm module baud rate should be set to be the same as the dome baud rate.

5 Menus

5.1 Menu Navigation

5.1.1 Entering Menu

Different keyboards have different ways of entering the menu system of a dome. Refer to specific keyboard manual for details.

Common examples are:

- Videoswitch Vi-K2 Press DOME then press MENU
- Videoswitch Vi-K3 Press and hold ALT then press DOME MENU
- BBV (TX400) Press and hold SHIFT then press 1
- Pelco (KBD300A) Enter 95 then press and hold PRESET key
- DS2 Press and hold * 8,8,910,10,2

5.1.2 Moving cursor

Once in the menu, the joystick may be used for LEFT, RIGHT, UP and DOWN control of the cursor. On a Videoswitch keyboard, the cursor keys can be used which is more convenient.

- UP move the cursor up, or change a value
- DOWN move the cursor down, or change a value
- RIGHT move the cursor right, or enter a sub-menu
- LEFT move the cursor left, or exit a sub-menu. When editing a title, you may need to go LEFT several times to exit

5.1.3 Select

Where a select key is required (eg setting a preset from within the menu) this is also dependent on keyboard type.

Common examples are:

- Videoswitch Vi-K2 - Press OK
- Videoswitch Vi-K3 - Press OK
- BBV (TX400) - Press 1
- Pelco (KBD300A) - Enter 96 then press and hold PRESET key
- DS2 Press Preset,10, then preset number e.g.1,2

5.1.4 Cancel

Where a cancel key is required (eg cancelling the setting of a preset from within the menu) this is also dependent on keyboard type.

Common examples are:

- Videoswitch Vi-K2 - Press WASH
- Videoswitch Vi-K3 - Press ALT and ESC
- BBV TX400 - Press WASH
- Pelco - Enter 97 then press and hold PRESET key

5.1.5 Exit Menu

Leave the menu by going LEFT out of all levels until you leave the menu. Alternatively, use the same key combination that was used to enter the menu. The menu will also exit automatically if not used for 5 minutes.

All changes made will be saved permanently when the menu has been exited. The message “Saved OK” will flash up on the screen to confirm this

The various branches of the menu system are described below. These may differ slightly depending on the version of firmware installed in the dome.

5.2 Login

Once you have entered the menu system, go RIGHT to enter the login screen. The login screen allows you to enter a password to gain access to other menus.

Use RIGHT and LEFT to move the cursor and UP and DOWN to change the digits. When you have entered the password, go LEFT repeatedly to exit the login screen. A message will appear on the screen to indicate whether you have successfully logged in, and with what access rights (User, Supervisor or Installer).

Password levels:

User	111100
Supervisor	222200
Installer	333300
Address set	serial number of dome (CMOR Evolution)

Once logged in, you remain logged in for 5 minutes from last use of the menu, even if you exit and re-enter the menu. If you want to log out more quickly to prevent unauthorised access, just enter an invalid password (e.g. 000000).

The login screen also displays this information about the dome:

- Brand
- Model
- Serial Number
- Firmware revision
- Alarm module firmware revision (if fitted)
- Protocol & Baud Rate
- Dome address

5.3 Setup

Use this sub-menu to select general dome configuration settings as below:

5.3.1 Enter date/time

Use UP, DOWN, LEFT and RIGHT to set the date and time.

The format is DD/MM/YY HH:MM:SS.

Move cursor LEFT to exit.

5.3.2 Daylight Saving

Default setting is AUTO which is suitable for use in Europe. Alternatively set to WINTER for no time change, or to SUMMER to advance the displayed time by one hour.

5.3.3 Language

The language used in the menu and for other messages is selected here.

5.3.4 Display

5.3.4.1 Date/Time Position

The position on the screen of the date and time may be set here using UP and DOWN. It may also be set to OFF (default) so that it is not displayed.

5.3.4.2 Camera Title

A title for the dome camera may be entered if required using UP, DOWN, LEFT and RIGHT. Move cursor LEFT to exit.

The position on the screen of the title may be set here using UP and DOWN. It may also be set to OFF so that it is not displayed.

5.3.4.3 Show Preset During Tours

This option determines whether or not the preset titles are displayed while a tour is in progress.

5.3.4.4 Preset Text Position

This option specifies where the preset title is displayed when a preset is called. Default is Bottom-Left.

5.3.4.5 Text Background

The displayed text may be given a black background if required to make it stand out more.

5.3.5 Passwords

5.3.5.1 Installer

The default password 333300 may be changed if required. Take care to make a note of the new password.

5.3.5.2 Supervisor

The default password 222200 may be changed if required. Take care to make a note of the new password.

5.3.5.3 User

The default password 111100 may be changed if required. Take care to make a note of the new password.

5.3.6 Datum Check

The dome can be set to perform a datum check every 24 hours, at midnight. This means that the dome will pan and tilt for a few seconds while it performs a self test and checks its alignment. It will revert to an existing preset or tour when the process is complete. It is recommended that the 24 hour option is selected (default)

5.3.7 Install date/time

The date and time of install may be set here to provide a record for future service or maintenance purposes.

5.3.8 Clear Settings

5.3.8.1 Clear configuration

To clear the menu configuration to the factory defaults, enter this menu, use UP to select YES and go LEFT to exit.

5.3.8.2 Clear all presets

To clear all the presets, enter this menu, use UP to select YES and go LEFT to exit.

5.3.8.3 Clear all tours

To clear all the tours, enter this menu, use UP to select YES and go LEFT to exit.

5.3.8.4 Clear privacy masks

To clear all privacy settings, enter this menu, use UP to select YES and go LEFT to exit.

5.3.8.5 Clear everything

To clear the configuration, presets and tours, enter this menu, use UP to select YES and go LEFT to exit.

5.3.8.6 Reboot

To restart the dome (equivalent to power cycling), enter this menu, use UP to select YES and go LEFT to exit.

Note that any unsaved changes to the configuration will be lost when this is done.

5.3.8.7 Diagnostic Info

- System
- Status
- Camera
- Telemetry

5.4 IR

Options relating to the built-in Infra Red (IR) lamps are set in this sub-menu.

5.4.1 IR Mode

This option determines when the IR lamps are turned on:

Light sensing (default)	-	the lamps turn on automatically when it gets dark
Timed	-	the lamps turn on according a time of day schedule
Manual	-	the lamps turn on and off under manual control

5.4.2 IR ON level

Set this number to specify the light level at which the IR lamps turn on. The lower the number the darker the light has to get before the lamps come on. The default setting is 75. The current light reading is displayed which can be useful if you want to note the light level at dusk when you want the IR lamps to come on.

5.4.3 IR Off level hysteretic

The IR lamps are turned off when the light level rises to the ON level plus this hysteretic value. The default is 125.

5.4.4 Auto IR delay

Set the time in seconds that you want the dome to wait before switching on or off due to a change in light level. This delay stops the dome responding to short term effects like car headlights that would otherwise cause the IR lamps to switch.

5.4.5 IR ON times

If the IR Mode is timed, use this option to specify the hours during each day that you want the IR lamps to be on. A solid block indicates that the lamps will be ON for that hour period. A dash indicates that they will be OFF. There are a total of 24 positions, one for each hour of the day. Go LEFT to exit.

5.4.6 IR Power

The power of the IR lamps may be set here. For maximum range set to 100%.

5.5 Camera

5.5.1 Main camera settings

5.5.1.1 Video Gain

The video gain may be set from 0 to 7 to compensate for losses in long cable runs. Default is 0.

5.5.1.2 Video Lift

The high frequency video lift may be set from 0 to 8 to compensate for losses in long cable runs. Default is 0.

5.5.1.3 Digital Zoom

This option selects whether you want to be able to zoom beyond the optical zoom limit and use digital zoom. The default setting is OFF.

5.5.1.4 Day Settings (IR OFF)

These settings apply when the IR lamps are not on.

5.5.1.4.1 Shutter Speed

The shutter speed may be slowed down to achieve greater light sensitivity. Normally this should be set to AUTO.

5.5.1.4.2 Exposure Compensation

5.5.1.4.3 Joystick Focus Mode

There are two settings; Auto & Manual. The default setting for DAY is AUTO.

5.5.1.4.4 Preset Focus Mode

There are two settings; Auto & Stored. The default setting for DAY is AUTO.

5.5.1.4.5 Zoom Limit

The zoom limit can be adjusted from1 – 100%

5.5.1.4.6 Backlight compensation

Backlight compensation can be turned ON or OFF

5.5.1.5 Night Settings (IR ON)

These settings apply when the IR lamps are on.

5.5.1.5.1 Shutter Speed

The shutter speed may be slowed down to achieve greater light sensitivity. For night time operation it may be useful to change this from its default AUTO setting. Longer time periods will cause blurring of moving images however.

5.5.1.5.2 Exposure Compensation

5.5.1.5.3 Joystick Focus

There are two settings; Auto & Manual. The default setting for NIGHT is Manual.

5.5.1.5.4 Preset Focus Mode

There are two settings; Auto & Stored. The default setting for NIGHT is manual.

5.5.1.5.5 Zoom Limit

5.5.1.5.6 Backlight Compensation

5.5.2 Context Camera

5.5.2.1 Not available

5.5.3 Invert Image

This inverts the image. This option is used only if the dome is mounted upside down.

5.6 Keyboard

This sub menu selects options relating to manual control from the joystick keyboard.

5.6.1 Restore Mode (Preset & Tours)

Set this option if you want the dome to revert to a TOUR or PRESET 1 after a specified period (in seconds) of inactivity.

If the restore mode is not required select OFF

5.6.2 Restore delay (Preset & Tours)

Select restore delay time in seconds. Select 180 seconds to OFF

5.6.3 Joystick/Speed Curve

This option determines the relationship between the joystick offset and the pan/tilt speed and the setting is a matter of user preference. If linear, the relationship is proportional. If quasi-linear or non-linear, the movement is slow to start with and increases rapidly as the joystick is moved more. The default is quasi-linear.

5.6.4 Zoom Ratio

This setting determines how much the pan and tilt slows down as you zoom in and the setting is a matter of user preference. This slow down helps fine control of the dome position when zoomed in on a target. The default setting is 16.

5.6.5 Max Joystick Speed

This setting affects pan and tilt and determines how fast the dome moves for a full deflection of the joystick. Generally control is easier if it is set to less than 100%. The default is 60%.

5.6.6 Pan Limits

5.6.6.1 Use Pan Limits

If you wish to stop the dome from panning all the way round, for example if it is mounted on a wall or corner, set this option (after you have set the right and left limits). Once set, the dome will stop if it is panned up to a limit. When moving between presets, the dome will also stay in the permitted zone rather than taking the shortest route as it would otherwise.

5.6.6.2 Set right limit

Enter this option and pan the dome to the right-most position that you want it to be able to go to. Press SELECT (or wait 10 seconds) to set the position

5.6.6.3 Set left Limit

Enter this option and pan the dome to the left-most position that you want it to be able to go to. Press SELECT (or wait 10 seconds) to set the position

5.6.7 Iris key usage

The Iris control keys on the keyboard may be used to either alter the:

Exposure compensation	Brighten or darken the image
Shutter speed	Provide integration and therefore more sensitivity in dark conditions. Note that the shutter speed can only be controlled in this way when the IR lamps are ON.

5.7 Presets

5.7.1 Set Preset

- To set a preset from within the menu, select this option using RIGHT.
- Use UP and DOWN to select a preset.
- Move the dome to the required position using the joystick.
- Wait 10 seconds or press the SELECT key.
- The new preset is not set

5.7.2 Preset Titles

Each preset may be given a title that is displayed every time it is called up. If no title is entered, the display will show P1, P2, P3 etc

To create a camera title, move joystick/arrow key RIGHT to enter ‘input’ mode. Move joystick/arrow keys UP/DOWN to select alphanumeric characters.

Move joystick/arrow keys LEFT to save & exit menu.

5.7.3 Preset Speed

The speed at which the dome moves to a preset is set here. The default setting is 60% of full speed.

5.8 Tours

Tours are sequences of up to 100 presets that the dome moves between automatically, dwelling for a period at each. The tour is repeated until interrupted by:

- Manual pan, tilt or zoom

- Calling up a preset
- An alarm

5.8.1.1 Tour 1 (to Tour 8)

5.8.1.1.1 Title

If you want a title to be displayed when you select a tour, enter it here. Otherwise the default T1, T2, T3 etc will be displayed.

5.8.1.1.2 Initialise Tour

Use this option to initialise a tour as follows:

- Set Fill the tour with presets. Presets that are not set will be ignored. As more presets are programmed, they will automatically be included in the tour.
- Clear Clear the tour of all presets
- Cancel Use LEFT to exit without changing the tour

5.8.1.1.3 Edit Tour

Each position of the tour may be edited using this option. Any positions set to “No Preset” will be ignored when the tour I running.

5.8.1.1.4 Dwell

This is the time in seconds between each preset being selected when the tour is running.

5.8.1.1.5 Speed

This is the speed at which the dome goes to the presets that are called up during a tour.

5.9 Privacy

Use this option to set up to 24 privacy zones

Step	Action	Result
1	Select dome **MENU from DVR/keyboard**	
2	**Log in** (using engineer pass code)	
3	Select **PRIVACY**	Default view **MASK 1** appears
4	Move joystick or arrow keys up/down to select a different MASK number, 1-24)	

5	Move joystick/arrow key right	Cross lines appear on screen
6	Move camera to required view	
7	Select **OK** (Vi K/B) or *01+preset* (Pelco K/B), or *Preset*, *10 ,1* (on DS2) or wait 15 seconds until a red mask patch appears	Red mask patch appears
8	Scroll to next MASK number (using arrow keys or joystick UP/DOWN)	Blue mask patch appears
9	Move joystick or arrow key to the RIGHT	Cross lines appear
10	For each new mask position, repeat steps 4 to 7	
12	When all mask positions have been created , exit menus & save by moving joystick left TWICE	'**Saving config…**' (appears on bottom left of screen)

5.10 Alarms

If the alarm option is installed in the power supply, the dome will go to presets when an alarm occurs. Alarms 1 to 16 map to presets 1 to 16 respectively.

Note that if the alarms are connected directly to the digital recorder (DVR) rather than the alarm option, the following settings have no effect.

5.10.1 New alarm dwell

When a new alarm occurs, the dome will go to the corresponding preset.

If multiple alarms occur, the presets will be called up in sequence. However, the dome will wait at each preset position for the dwell time set by this option (in seconds).

5.10.2 Alarm cycle time

If alarms still exist after all alarm presets have been visited for the New alarm dwell time, the presets of the still active alarms will now be toured using the cycle time (in seconds) specified in this option.

6 Technical Data

6.1 Vi-D1 *Classic* and Vi-D2 *Evolution* Domes

6.1.1 Camera

Sony Ex-View Had ¼" CCD

18:1, 26:1 or 36:1 optical zoom and optional 12:1 digital zoom

6.1.2 IR Illumination

Double-hetero AlGaAs LEDs
830nm wavelength (optional 940nm fully covert)
Degradation estimated at 3% per year (not guaranteed)

6.1.3 Power requirements

24V DC, 2.5Amps Maximum

6.1.4 Physical and Environmental

Colour	Grey (custom colours may be ordered)
Operating Temperature	-35degC to 50degC
Environmental	IP66
Dimensions/Weight	252.4mm x 485mm x 225.8mm (HxWxD), 4.32kg
Dimensions/Weight (Boxed)	385mm x 300mm x 300mm (HxWxD), 4.72kg

6.2 Vi-PSU-1 Power Supply

6.2.1 Power requirements

Input	100 to 240 Vac 50/60Hz
Output	24Vdc, 2.5A

6.2.2 Physical and Environmental

Environmental	IP66
Dimensions/Weight	230mm x 140mm x 100mm (LxWxD), 1kg
Dimensions/Weight (Boxed)	340mm x 225mm x 140mm (LxWxD), 1.3kg

6.2.3 Safety

For safety reasons, the internal metal cover must not be removed. There are no user serviceable parts inside.

6.3 Vi-ALM1 Alarm Module

6.3.1 Alarm Inputs/Outputs

16 inputs, suit normally open or normally closed triggers

1 change over relay output for signally to DVR

6.3.2 Physical and Environmental

Environmental IP66 when fitted in PSU)

6.4 Brackets and Cables

6.4.1 Vi-B2 Wall bracket

6.4.2 Vi-B5 Corner adaptor

6.4.3 Vi-B4 Swan-neck bracket

6.4.4 Vi-B3 Pendant bracket

6.4.5 Vi-B6 Pole mount bracket

6.4.6 Vi-B7 Dome adaptor

6.4.7 Vi-B8 Ceiling Mount Kit

6.4.8 Cables

Cables with custom lengths may be ordered.

6.5 CE Marking

This product is CE marked. It has been fully tested and complies with 89/336/EEC Electromagnetic Compatibility and 73/23/EEC Low Voltage directives, and with EN 60950:2000 safety standards.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Serial Number of dome

Notes